

Stormwater Rulemaking

**Holly Galavotti & Greg Schaner
US Environmental Protection Agency
Office of Water**



Today's Outline

- **Stormwater challenges and the National Research Council (NRC) Report**
- **Stormwater Rulemaking Schedule - Information Collection Request**
- **Preliminary Considerations for Rulemaking**

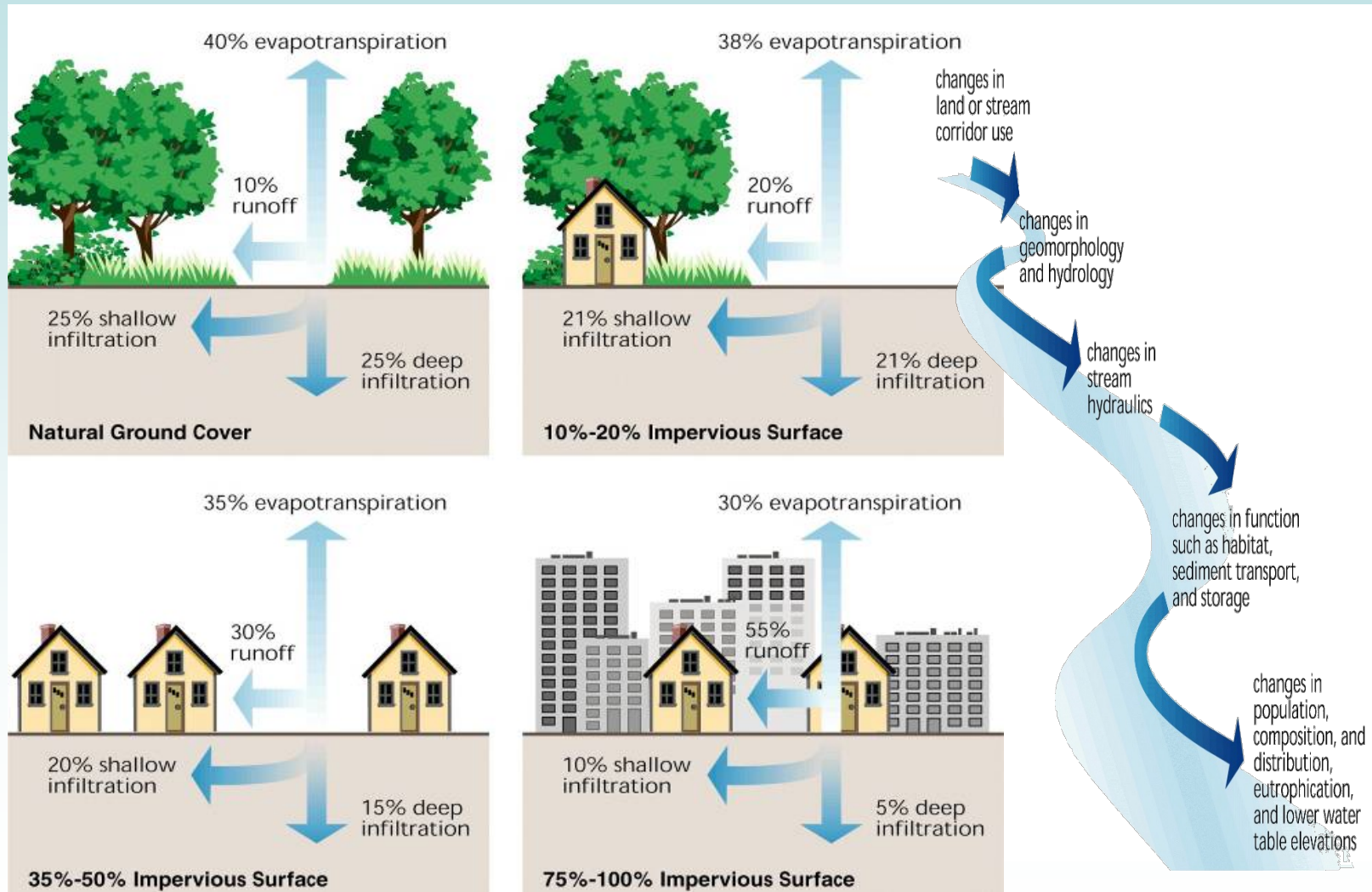
Stormwater Challenges

- Urban stormwater is the primary source of water quality impairment:
 - 13% of all rivers and streams
 - 18% of all lakes
 - 32% of all estuaries
 - These results are significant given that they reflect urban areas that cover only 3% of the land mass of the U.S.
- Current scope of stormwater regulations is insufficient
 - Many developed and rapidly developing areas are excluded from regulation
 - Regulatory provisions for controlling discharges from new development, redevelopment are weak
 - Lack of requirements for addressing discharges from existing development
 - Some discharges directly to a waterbody within an MS4 jurisdiction are excluded from federal regulation



High volumes of stormwater discharge have badly damaged this stream near Philadelphia. City of Philadelphia Water Department. NRC Report.

Impacts of urbanization on stormwater runoff



National Research Council (NRC) Report

- In 2006 EPA commissioned the National Resource Council (NRC) to study EPA's stormwater program
- In October 2008 NRC released *Urban Stormwater Management in the United States*, available at: www.epa.gov/npdes/stormwater
- Key Findings
 - Current approach is unlikely to produce an accurate picture of the problem and unlikely to adequately control stormwater's contribution to waterbody impairment
 - Requirements leave a great deal of discretion to dischargers to set their own standards and ensure compliance, inconsistency across the nation
 - Poor accountability and uncertain effectiveness

KEY NRC Report Recommendations

- Flow and related parameters like impervious cover should be considered for use as proxies for stormwater pollutant loading.
- Even though 'pollutant' is defined broadly in the Act to include virtually every imaginable substance added to surface waters, including heat, it has not traditionally been read to include water volume.
- A more straightforward way to regulate stormwater contributions to waterbody impairment would be to use flow or a surrogate, like impervious cover, as a measure of stormwater loading.
- Efforts to reduce stormwater flow will automatically achieve reductions in pollutant loading. Moreover, flow is itself responsible for additional erosion and sedimentation that adversely impacts surface water quality.
- Stormwater control measures that harvest, infiltrate, and evapotranspire stormwater are critical to reducing the volume and pollutant loading of small storms.

Update on the NPDES Program

Active Construction Stormwater Program:

Final Construction & Development Effluent Guideline issued on Dec. 1, 2009

- <http://www.epa.gov/waterscience/guide/construction/>
- Construction General Permit expires June 30, 2011
- <http://www.epa.gov/npdes/stormwater/cgp>

EPA Initiated Stormwater Rulemaking

- Oct. 30, 2009 - EPA published a Federal Register notice announcing an Information Collection Request (ICR) seeking data pertaining to current stormwater management practices to inform rulemaking from the following groups:
 - Owners, operators, developers, and contractors of developed sites
 - Owners or operators of MS4s
 - States and territories
- Jan. – Feb. 2010 – Listening Sessions input on preliminary rule making considerations (FR Notice published Dec. 28, 2009)
- Spring 2010 - EPA will publish a second Federal Register ICR notice and distribute questionnaires in the summer
- Late 2011 - Proposed rule to be signed and published in the Federal Register for public comment
- Late 2012- Final Action Taken

SW Rule Listening Sessions

- Public listening sessions will provide an opportunity for the public to provide input on regulatory actions that EPA is considering.
 - January 19, 2010, Chicago
 - January 20, 2010, San Francisco
 - January 25, 2010, Denver
 - January 26, 2010, Dallas
 - January 28, 2010, Washington, DC
 - February 3, 2010, “Virtual Listening Session” Webcast
- Submit written comments to www.regulations.gov, Docket ID No. EPA-HQ-OW-2009-0817 by February 26, 2010.

Five Preliminary Considerations for Rulemaking

1. Redefine the area subject to federal stormwater regulations.
2. Establish specific requirements for new and redevelopment.
3. Develop a single set of consistent requirements for all regulated Phase I and Phase II MS4s.
4. Require MS4s to address stormwater discharges from existing development through retrofitting.
5. Include additional requirements to further reduce stormwater impacts in sensitive areas.

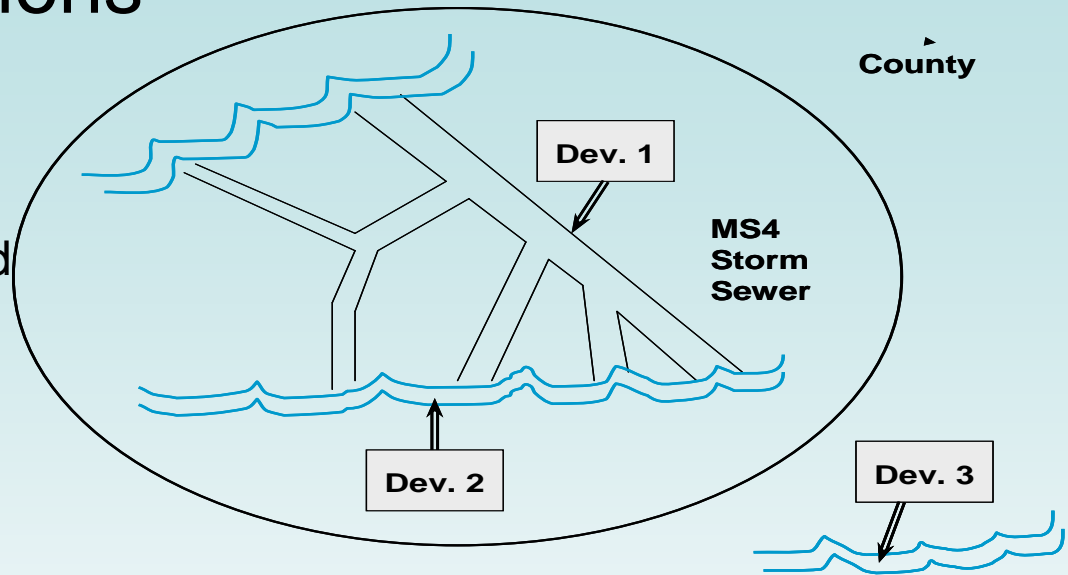
1. Expand the area subject to federal stormwater regulations



- Automatic designation under the Phase II MS4 limited to Urbanized Area boundary as defined by the U.S. Census (area shown in red on the map).
- However, this only covers 2% of total U.S. land area, while most development is occurring outside covered areas
- Some states (e.g. CA, NJ) have designated additional areas

1. Redefine the area subject to federal stormwater regulations

- What is the best way to extend federal regulation beyond the Census urbanized boundary?
- Is there an appropriate jurisdictional boundary for permit coverage, such as municipality or county?



- Could federal coverage include discharges directly to a waterbody but located within a regulated MS4 jurisdiction (Dev. 2)?
- Should EPA consider regulating stormwater discharges from particular types or sizes of development that are not covered by an MS4 permit (Dev. 3)?
- Could we include areas based on development pressure and/or water quality concerns (Dev. 3)? If so, how should we identify them?

2. Establish specific requirements to control stormwater discharges from new development and redevelopment

- Develop a standard that promotes sustainable practices that mimic natural processes to infiltrate and recharge, evapotranspire, and/or harvest and reuse precipitation



2. Establish specific requirements to control stormwater discharges from new development and redevelopment (cont.)

- Should there be a national requirement for on-site stormwater controls such that post development hydrology mimics pre-development hydrology on a site-specific basis?
- Options for meeting the requirement could be: on-site retention of specific sized storm (e.g. 95% storm, 1st inch of rainfall), limits on amount of effective impervious area, use of site-specific calculators to determine predevelopment hydrology, and/or use of regional standards to reflect local circumstances
- Not one size fits all!
- Input on standards for new development vs. redevelopment
- Input on management of operation and maintenance of the these practices
- Standards could also apply to discharges from new and redevelopment that are not covered by an MS4 permit

3. Develop a single set of consistent requirements for all regulated Phase I and II MS4s



- Many Phase I & II MS4s address issues that are identical (Phase I regs are primarily application requirements, Phase II regs focus on 6 minimum measures).
- Should EPA apply the six minimum measures to all MS4s?
- Phase I MS4s are required to implement a program to control discharges from industrial facilities. Should this requirement be extended to all MS4s?
- What additional requirements should be considered?

4. Requirements for MS4s to address stormwater discharges from existing development.

- Stormwater discharge from developed areas is a significant contributor to water quality impairments.
- In some states, MS4 permits now require the MS4 to install retrofit practices that infiltrate or otherwise retain stormwater.
- Should EPA consider requirements for the retrofit of existing development to address stormwater, such as a long-term implementation plan?



Chicago's Green Alleys Program

With approximately 1,900 miles of public alleys, Chicago has one of the most extensive and important pieces of infrastructure of any city in the world. That's approximately 3,500 acres of paved impermeable surface that provides an opportunity to better manage our resources and improve our environment.



Benefits:

- Stormwater Management
- Heat Reduction
- Material Recycling
- Energy Conservation and Glare Reduction

30th Street Industrial Corridor in Milwaukee

- Mix of residential areas and industrial properties.
- Many of the manufacturing businesses have closed.
- Numerous Brownfield sites

The City has been working with U.S. EPA on the idea of implementing green infrastructure throughout the corridor:

- Street planters
- Rain gardens
- Stormwater parks
- Community gardens

The goals are to better manage stormwater and to make the corridor more attractive to residents and businesses.



5. Include additional changes to the stormwater regulations in sensitive areas.



- Should EPA consider making any other changes to the current regulatory program (e.g. specific structural (buffers) or nonstructural stormwater control measures) to protect waterbodies in sensitive areas?
- EPA will consider options for going beyond national requirements in the Chesapeake Bay watershed as part of the Executive Order.
 - More stringent elements such as more extensively redefining MS4
 - Establishing more stringent stormwater retention requirements for newly developed and redeveloped sites, and applying these requirements to smaller sites.

Additional Information

- EPA website on rulemaking

www.epa.gov/npdes/stormwater/rulemaking

- EPA stormwater website

www.epa.gov/npdes/stormwater

- Listening Session Webcast

Feb. 3, 2010 from 12:00 – 4:00 Eastern

Sign up at www.epa.gov/npdes/training